Interim Forest Management Plan
Lower Wisconsin State Riverway

Property Identifiers

Property Name and Designation (multiple small properties can be grouped):
LOWER WISCONSIN STATE RIVERWAY - #7925 WR

County(ies):
DANE, SAUK, IOWA, RICHLAND, GRANT, CRAWFORD

Property Acreage:
45,484

Forestry Property Code(s):
2232

Master Plan Date:
Previous Master Plan 1988. Implementation Plan 1992 (covering period from 1992-1998). Implementation Plan 2009 (covering period from 2009-2014). Master Planning for this property is scheduled for 2013-2014.

Part 1: Property Assessment

Comprehensive management and protection of the natural communities of the Lower Wisconsin State Riverway (LWSR or "Riverway") was recognized in the 1988 *Final Environmental Impact Statement: Proposed Lower Wisconsin State Riverway* as one of the primary reasons for its establishment. Since that time, management of the Riverway has continued within the context of the 1988 EIS, commonly referred to as the 1988 Master Plan. Further detail was provided in 1992, when the Wisconsin Department of Natural Resources (DNR) developed the first Implementation Element, an internal resource management plan based on the Master Plan, and covering the period from 1992-1998. More recently, the 2009-2014 Implementation Plan was developed by the DNR LWSR Team, an inter-disciplinary team composed of staff representing forestry, wildlife management, endangered resources, fisheries, water resources management, lands and facilities, science services, parks and recreation, and law enforcement, and is intended to guide resource management of the DNR-owned parcels within the Riverway, consistent with the overall goals and prescriptions of the 1988 Master Plan. Its purpose is to serve as both a guide and a mechanism for tracking the status of resource management actions identified in all three documents: the 1988 Master Plan, the 1992 Implementation Plan and the more recent 2009 Implementation Plan. This plan, effective from 2009-2014, provides the final updated implementation plan until a new Master Plan is completed. Components of these documents detailing the property background and previous master plan guidance are referenced and included in this Interim Forest Management Plan.

GENERAL PROPERTY DESCRIPTION

The **Lower Wisconsin State Riverway** (LWSR) boundary contains 79,275 acres, of which over 44,000 are in state ownership, divided into 26 management units, containing or adjacent to several State Natural Areas (SNA), and 2 State Parks. Management is a team effort by wildlife managers, fisheries staff, foresters, park managers, wardens, land agents, and various natural resource specialists.

- **LANDSCAPE AND REGIONAL CONTEXT**

The Lower Wisconsin State Riverway lies in the **Western Coulee and Ridges Ecological Landscape** (WCREL), which is also located within the Driftless Area of Wisconsin, a region that has not been glaciated for at least the last 2.4 million years. The topography within the greater WCREL is characterized by its highly eroded, unglaciated topography with steep-sided valleys and ridges, high

gradient headwater streams, large rivers with extensive, complex floodplains and terraces and relatively extensive forested landscape. Soils are silt loams (loess) and sandy loams over sandstone residuum over dolomite. The LWSR is bounded by a single Landtype Association (222Lc17 – Mississippi River Valley Train-South). Dendritic drainage patterns are well-developed. Natural lakes are restricted to the floodplains of large rivers. Large warmwater rivers are especially important in the WCREL.

Historical vegetation in this landscape consisted of southern hardwood forests, oak savanna, scattered prairies and floodplain forests and marshes along the major rivers. With Euro-American settlement, most of the land on ridgetops and valley bottoms was cleared of oak savanna, prairie, and level forest for agriculture. The steep slopes between valley bottom and ridgetop, unsuitable for raising crops, grew into oak-dominated forests after the ubiquitous presettlement wildfires were suppressed.

Current vegetation is a mix of forest (41%), agriculture (36%), and grassland (14%) with some wetlands (5%) in the river valleys. The primary forest cover is oak-hickory (51%) dominated by oak species and shagbark hickory. Maple-basswood forests (28%), dominated by sugar maple, basswood, and red maple, are common in areas that were not subjected to repeated presettlement wildfires. Bottomland hardwoods (10%) are common in the valley bottoms of major rivers and are dominated by silver maple, swamp white oak, river birch, ash, elm, cottonwood, and red maple. Relict conifer forests composed of white pine, hemlock and associated hardwoods are rare but do occur in the cooler, steep, north slope microclimates. Prairies are now restricted to steep south- or west-facing bluffs, unplowed outwash terraces along the large rivers, and a few other sites. They occupy far less than 1% of the current landscape.

- **PROPERTY CONTEXT/LANDSCAPE**

The Lower Wisconsin State Riverway is a significant resource within the context of the Midwestern United States. It is identified in Wisconsin's 2006 *Land Legacy Report* as one of Wisconsin's most significant conservation and recreational areas. The Department's *Wildlife Action Plan* identifies the river corridor as one of the highest priority areas for conservation and long-term protection of many of the state's Species of Greatest Conservation Need (SGCN), terrestrial and aquatic. This 92-mile-long Riverway, with its characteristic gradient from river, sloughs and marshes, to forested bottomlands to sand terraces to bluff tops, harbors high species and community diversity and richness. Its importance is magnified through common boundaries with the nationally significant Mississippi River, the Driftless Area, and the Upper Mississippi migratory bird flyway. The Riverway property is included in the Lower Wisconsin River *Important Bird Area* by the Wisconsin Bird Conservation Initiative, for the critical habitat it provides for many forest, grassland and marsh birds of conservation concern. Furthermore, the rich cultural history of the region, as well as the thriving communities present today along the Riverway, provide unique opportunities for management.

The Lower Wisconsin River within the State Riverway boundary is listed as an Exceptional Resource Waterway by statute (ch. NR 102, Wis. Adm. Code), affording increased water quality protection. Furthermore, in the Driftless Area where natural lakes are scarce, an extensive network of Wisconsin River sloughs, floodplain and oxbow lakes function as ecologically significant areas for rare fishes, bryozoans, aquatic insects, reptiles and amphibians. Recent surveys of over 100 of these waterbodies indicate that they are sanctuaries for aquatic plants and fish not typically found in the main channel. The floodplain lakes and sloughs may contain the most abundant populations of rare and endangered aquatic species in southern Wisconsin.

- **HISTORY OF LAND USE AND PAST MANAGEMENT**

Since early man first viewed the Lower Wisconsin in a time before recorded history, a variety of explorers, traders, writers, soldiers, settlers, raftsmen, naturalists, artists and recreators have traveled the river. The earliest written thoughts about the Wisconsin were by the explorers, Joliet and Marquette in 1673, and though over 300 years have passed, have a familiar ring: "It is very wide, it

has a sandy bottom, which form various shoals that render its navigation very difficult. It is full of islands covered with vines. On the banks one sees fertile land, diversified with woods, prairies and hills..." Another traveler of the 1830's was impressed by the "beautifully skirted banks and prairie bluffs". Now in the late 20th century, the river still maintains much of this scenic beauty. Long stretches of shoreline still appear as they did to pioneer travelers with long vistas of prominent wooded bluffs, many sandbars and islands, extensive lowland forests and open wetlands. The 92 miles of the Wisconsin River downstream of the dam at Prairie du Sac is one of the longest remaining free-flowing stretches of river left in Wisconsin and the Midwest.

The 2009 LWSR Implementation Plan (pages 7-9) contains a lengthy and detailed summary of the ecological changes which occurred along the Riverway in recent history. In 1944, the Department began purchasing wildlife area lands along the Lower Wisconsin River for public hunting, habitat management and general recreational use. Prior to establishment of the LWSR by the legislature in 1989, there were nine separate wildlife areas, totaling about 22,500 acres of ownership along the river corridor. These properties were consolidated and re-designated as Riverway lands, forming the core of the new project and a single comprehensive management unit for the entire lower river. Management of the Riverway emphasizes multiple use management with special emphasis on recreation and scenic quality. The overarching goal is to provide a quality public use area for unique river corridor activities and compatible recreational pursuits; maintain the generally natural and scenic landscape of the Lower Wisconsin Riverway; and manage the corridor's natural resources for the long-term benefit of the citizens of the area and state.

SITE SPECIFICS

- ***Current forest types, size classes and successional stages:***
  - Aspen – a total of 93 acres (<1% of recon). The majority of acreage is 70+ years old, which is beyond the normal rotation length of 50-60 for the species.
  - Bottomland hardwood – a total of 14,980 acres (59% of recon). Age distribution mostly between 50-120 years old. Most of the acreage is 75-100 years old. A distinct lack of stands younger than 50 years old shows that regeneration harvesting is needed to create balance. Normal rotation length is 120 years.
  - Central hardwoods – a total of 1,493 acres (6% of recon). Age distribution mostly between 20-100 years old. Normal rotation length is 80-120 years
  - Northern hardwoods – a total of 341 acres (1% of recon). Age distribution between 70-100 years old. This type shows a need for creation of younger stands. Rotation length 80-120 years even-aged systems, continuously regeneration under uneven-aged systems.
  - Oak – a total of 7,072 acres (28% of recon). Age distribution mostly between 70-115 years of age. This type has some younger aged stands, but there is a need to focus on balancing the current growing stock through harvesting or planting. Normal rotation length 80-120 years.
  - Jack pine- a total of 251 acres (1% of recon). Age distribution between 35-75 years. Normal rotation length 50 years. A need exists for young stands.
  - Red pine – a total of 375 acres (1% of recon). Age distribution between 40-60 years. Normal rotation length 90 years.
  - White pine – a total of 419 acres (2% of recon). Age distribution well balanced from 14-85 years. Normal rotation length is 110-180 years.
- ***Wildlife Action Plan / Species of Greatest Conservation Need:*** The LWSR is specifically listed in the DNR's Wildlife Action Plan's Implementation document for the Western Coulee and Ridges Ecological Landscape (WCREL) (http://dnr.wi.gov/topic/WildlifeHabitat/COA.html). Twenty-two natural community types are listed as areas for which there are "major" opportunities for protection, restoration or management within the LWSR. These communities are also listed in the Rapid Ecological Assessment for the LWSR and are as follows: Cedar Glade, Dry Prairie, Dry-mesic Prairie, Emergent Marsh, Ephemeral Pond, Floodplain Forest, Mesic Prairie, Moist Cliff,

Oak Barrens, Oak Opening, Oak Woodland, Pine Barrens, Pine Relict, Sand Prairie, Shrub Carr, Southern Dry Forest, Southern Dry-mesic Forest, Southern Mesic Forest, Southern Sedge Meadow, Surrogate Grasslands, Warmwater River, Warmwater Streams, and Wet-mesic Prairie. The Wildlife Action Plan also identifies Priority Conservation Actions applicable to the LWSR, which are also listed in the Rapid Ecological Assessment document (page 69).

Priority Species of Greatest Conservation Need for the WCREL associated with the community and habitat types in the LWSR include Black Buffalo, Blue Sucker, Bluntnose Darter, Crystal Darter, Goldeye, Paddlefish, Pallid Shiner, River Redhorse, Shoal Chub, Starhead Topminnow, Western Sand Darter, Blanding's Turtle, Bullsnake, Eastern Massasauga, Midland Smooth Softshell Turtle, Northern Prairie Skink, Ornate Box Turtle, Pickerel Frog, Prairie Racerunner, Prairie Ringneck Snake, Timber Rattlesnake, Acadian Flycatcher, Bell's Vireo, Black-billed Cuckoo, Brown Thrasher, Canvasback, Cerulean Warbler, Eastern Meadowlark, Field Sparrow, Grasshopper Sparrow, Great Egret, Kentucky Warbler, Lark Sparrow, Lesser Scaup, Louisiana Waterthrush, Northern Bobwhite, Prothonotary Warbler, Red-headed Woodpecker, Red-shouldered Hawk, Western Meadowlark, Willow Flycatcher, Wood Thrush, Yellow-billed Cuckoo, Yellow-crowned Night-Heron, Elktoe, Rock Pocket Book, Spectacle Case, Purple Wartyback, Butterfly, Elephant Ear, Snuffbox, Ebony Shell, Higgin's Eye, Washboard, Bullhead, Mapleleaf, Winged Mapleleaf, Flat floater, Round Pigtoe, Monkeyface, Salamander Mussel, Wartyback, Buckhorn, Fawnsfoot, Pink Papershell, Yellow Sandshell, Slough Sandshell, Pecatonica River Mayfly, Armored Mayfly, Flat-headed Mayflies, Cleft-footed Minnow Mayfly, Sand Snaketail, Brush-legged Mayflies, Fragile Forktail, Eastern Red Damsel, Royal River Cruiser, Small Square-gilled Mayfly, Dubirahia Riffle Beetle, Swamp Darner, Lancet Clubtail, Predaceous diving Beetles, Common Netspinner Caddisfly, Pygmy Snaketail, Small Minnow Mayflies, Common Burrower Mayfly, Knobel's Riffle Beetle, Speckled Rangeland Grasshopper, Green-streaked Grasshopper, Mermiria Grasshopper, Sand Locust, Seaside Grasshopper, Obscure Grasshopper, Spot-winged Grasshopper, Dawson's spur-throated Grasshopper, Blue-legged Grasshopper, Spur-throat Grasshopper, Gladston's Spur-throat Grasshopper, Northern Marbled Grasshopper, Virginia Big-headed Tiger Beetle, and Red-tailed Leafhopper.

Additionally, the property is identified in the Wildlife Action Plan's implementation document as containing "unmapped" Driftless Area Features of Continental Significance including a Dry Prairie, Algific Talus Slopes, Bat and Herp Hibernacula, Hemlock Relict, Pine Relicts, and Moist Cliff. Priority SGCN associated with these features not already listed above include Redside dace, Black Rat Snake, Northern Long-eared bat, Cherrystone Drop Snail, and Midwest Pleistocene Vertigo.

- ***Conservation Opportunity Area (COA) designations***: The LWSR has been identified within the 2005 Wisconsin Wildlife Action Plan and has several recognized **Conservation Opportunity Areas** (COA). The **Lower Wisconsin Bluffs and Floodplain COA** and the **Lower Wisconsin River COA** were recognized as COAs of Continental Significance because of the large river system that includes riparian natural and upland natural communities that support numerous Species of Greatest Conservation Need.
- ***Natural Heritage Inventory (NHI) / Rare species:*** Natural Heritage Inventory screenings will be conducted prior to all management for both rare species and natural community types.

  The LWSR supports 92 known element occurrences of 44 rare plant species, including 4 State Endangered species, 5 State Threatened species, and 35 State Concern species. Particularly significant are rare plants associated with four groups of natural communities for which significant management opportunities exist on the LWSR: 1) Floodplain Forest, 2) Southern Mesic Forest, 3) Oak Barrens, and 4) Oak Woodland/Oak Openings.

  The Lower Wisconsin State Riverway supports 480 known occurrences of 121 rare animal species (including 3 Federally listed or candidates for listing, 15 State Endangered species, 22 State Threatened species, and 66 state Special Concern species). This large number of rare animals from numerous taxonomic groups reflects the overall diversity of good-quality habitats

that are present throughout the property. Over 37% of the animals on the State Threatened and Endangered Species lists are found in the LWSR. The LWSR plays a critical role in conserving several taxa in particular, including grassland birds, forest interior birds, herptiles, fishes, aquatic and terrestrial invertebrates, marsh birds, and bat hibernaculum.

- ***State Natural Area designations:*** There is a significant concentration of State Natural Areas found within the LWSR. Twenty SNAs, totaling approximately 6,740 acres or 13% of the fee-title property within the LWSR, have been established within the LWSR. These sites harbor a broad spectrum of native terrestrial and aquatic plant communities that are an excellent reflection of the diversity of this biologically rich landscape (WDNR 2010b). SNAs currently located within the LWSR boundary are listed below, with links to webpages with site-specific information:
  - Wyalusing Walnut Forest SNA
  - Wyalusing Hardwood Forest SNA
  - Adiantum Woods SNA
  - Wauzeka Bottoms SNA
  - Woodman Lake Sand Prairie And Dead Lake SNA
  - Richwood Bottoms SNA
  - Blue River Bluffs SNA
  - Blue River Sand Barrens SNA
  - Orion Mussel Bed SNA
  - Avoca Prairie and Savanna SNA
  - Gotham Jack Pine Barrens SNA
  - Smith Slough And Sand Prairie SNA
  - Bakken's Pond SNA
  - Spring Green Preserve SNA
  - Tower Hill Bottoms SNA
  - Arena Pines and Sand Barrens SNA
  - Mazomanie Bottoms SNA
  - Ferry Bluff SNA
  - Lodde's Mill Bluff SNA
  - Mazomanie Oak Barrens SNA
- ***High Conservation Value Forests (HCVF) or other resources/ natural community types limited in the landscape:*** Within the LWSR, 114 high-quality natural communities representing 26 different types have been documented and are mapped in the NHI database. These areas can be considered opportunities to develop or protect High Conservation Value Forests. The best opportunities for HCVF on the LWSR are the Primary Sites (listed in the Rapid Ecological Assessment, see below), as well as high quality natural communities and rare species habitat areas that are outside of the Primary Sites.
- ***Biotic Inventory status (see website):*** An extensive Rapid Ecological Assessment of the property was completed in 2011. This document is available on the Department's website http://dnr.wi.gov/topic/nhi/nhireports.asp under DNR Publication PUB-ER-830-2011. Additional inventories may be conducted to facilitate development of the property master planning process, which has already been initiated.
- ***Deferral/consultation area designations:*** Primary Sites were developed and finalized following two years of biotic inventory. Twenty-eight Primary Sites were identified on the LWSR. A total of 32 deferral/consultation area designations have been identified on the LWSR property; however, the process will not be finalized until the final master planning process is completed.
- ***Invasive species:*** Many invasive plants, animals and pathogens, both terrestrial and aquatic, are present in the LWSR and surrounding landscape. The high recreational usage of the LWSR has contributed to the introduction and spread of invasive species throughout the property. Campgrounds, trails, navigable waters, and other high-use areas are typical entry points for invasive species that are introduced by visitors' footwear, clothing, vehicle tires, boats, and recreational equipment. Common invasive species found in the LWSR corridor include Eurasian honeysuckle, common buckthorn, autumn olive, Japanese barberry, multiflora rose, and black locust, garlic mustard, spotted knapweed, teasel, sweet-clover, exotic vetch, purple loosestrife, reed-canary grass and the aquatic invasive, Eurasian water milfoil, gypsy moth, emerald ash borer (EAB), oak wilt (caused by a fungus, *Ceratocystis fagacearum*), European earthworms, Asian carp, mosquitofish, zebra and quagga mussels, and spiny water fleas, among others.
- ***Soils:*** Soils are silt loams (loess) and sandy loams over sandstone residuum over dolomite.

CULTURAL AND RECREATIONAL CONSIDERATIONS

- ***Cultural and archeological sites (including tribal sites):*** For thousands of years, native people utilized the Lower Wisconsin State Riverway as a water highway system. The Riverway served as a valuable link between the Mississippi River and the Great Lakes. Raw materials and finished goods from all over the continent traveled the Riverway in trade networks dating back over 3,000 years. The Lower Wisconsin State Riverway contains archeological sites throughout the system. There are numerous examples of mounds found throughout the bluffs and terraces of the Riverway. The LWSR also contains one of the most important encounters of the Black Hawk War, the Battle of Wisconsin Heights, which occurred at a crossing on the LWSR. The present compilation of cultural resources represents a sizable, although not exhaustive, inventory of prehistoric and historic sites due to the fact that no systematic archaeological survey work has been conducted on many areas of the riverway. Thousands of years of human occupation remain buried within the valley walls and any forestry operations occurring on known archeological sites will be approved by the department archeologist and any recommendations will be followed.
- ***Recreational uses:*** The LWSR is an important recreational resource for the state and is one of the primary recreational resources for the southern half of Wisconsin. The LWSR currently exists within a landscape dominated by privately owned lands where public recreation is extremely limited. In contrast, the river, backwaters, and uplands within the Riverway provide diverse recreational opportunities including boating, hiking, fishing, wildlife viewing, hunting, trapping, cross- country skiing, snowmobiling, horseback riding, and nature study. With many miles of accessible trails, rivers, prairies and forests, the Riverway plays an integral role in promoting healthy, nature-based activities among state citizens as well as others who may travel to Wisconsin from afar. These activities serve not only to promote the physical and mental well-being of those participating, but also to foster a deeper understanding of and regard for nature. This type of use translates to greater involvement in public processes that influence long-term preservation. Additionally, the users of the Riverway contribute financially to local communities while they recreate, and this further enhances regional resource appreciation.

Part 2: Future Management

FOREST MANAGEMENT OBJECTIVES (Outline primary forest management objectives):

- Prescribe forest management that emulates the LWSR's historic, natural disturbance regime. Recognize that bottomland hardwood and oak types are not well distributed by age class on the landscape – there is a need to balance older forest types by beginning to create younger ones through timber harvesting.
- Establish timber sales per long-term harvest goal and in coordination with LWSR staff and LWSR Board.
- Establish target forest structure for the LWSR landscape. This may include:
  - Stand species composition
  - Stand age structure
- Provide for historically under-represented tree species, age classes, and size classes as a part of LWSR forest management.
- Identify priority action areas and strategies for controlling forest invasive plant species.
- Identify priority action areas and strategies for managing to limit the effect of gypsy moth defoliation and EAB infestation.
- Annually establish annual and long-term harvest goals for LWSR.
- Continue public outreach concerning ecologically-based forestry within the LWSR. This entails proper silviculture for the LWSR and landscape considerations in stand level management on private property.

- Continue forest reconnaissance on a 15-year cycle, aiming to update 1,700 acres per year.
- Continue tree planting program to augment natural regeneration and reforest old fields and retired sharecropping tracts where appropriate.
- Assist tree and plant species migration with planting in the LWSR. Tree species to consider in future plantings include Kentucky coffee tree, red mulberry, sycamore, chinkapin oak, and DED resistant elm.
- Promote the oak forest type on dry-mesic and mesic sites to help offset declines in Wisconsin and the Midwest, as noted in the Statewide Forest Plan (Forestry Division).
- With all forest management objectives, there are several more universal objectives that can be attained including options such as increasing large snags and coarse woody debris, controlling the spread of invasive plant species and consideration for Wildlife Action Plan priorities and management of SGCNs. The Riverway is identified as a Priority Conservation Opportunity Area in the state's Wildlife Action Plan. Integrating Priority Actions from Wisconsin's 2005-2015 Wildlife Action Plan to the extent possible within framework of the existing Master Plan, or avoiding actions that might preclude successful implementation of these actions in the future is recommended.

PROPERTY PRESCRIPTIONS (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives):

All timber sales are brought before quarterly property management meetings for approval and must secure a permit from the Lower Wisconsin Riverway Board.

Forest Types (and corresponding % of 25,601 forested acres on the LWSR property)

(1) **Aspen (<1%)** – Maintain this type on the landscape whenever possible by coppice regeneration harvesting when silviculturally appropriate.

(2) **Bottomland Hardwood (59%)** – This is the most abundant forest type on the LWSR, and provides valuable habitat for a multitude of bird species and other wildlife. Focus on maintaining large blocks of this type to meet wildlife habitat needs and to retain the special overall significance of this type on the property. Employ intermediate thinning where appropriate to maintain health and vigor, and use small patch harvesting in an uneven-aged management system to regenerate the type while mimicking natural disturbance. Uneven-aged management through patch clearcuts will retain the habitat benefits of large canopy trees, while allowing sunlight to the forest floor to grow new seedlings and provide multiple vegetation layers.

(3) **Central Hardwood (6%)** – Depending on desired species in the central hardwoods mix to manage at the stand level, use a variety of silvicultural systems. Regeneration options include uneven-aged management through group selection, or even-aged management through clearcutting or shelterwood.

(4) **Northern Hardwood (1%)** – Conduct intermediate thinnings when needed to maintain stand health and vigor. Regeneration options include uneven-aged management in most cases through group selection, or even-aged management through overstory removal or shelterwood on degraded sites.

(5) **Oak (28%)** – Focus on maintaining existing oak stands and increasing acreage where possible through planting. Oak forests are regionally important for wildlife habitat, ecologic , economic, and aesthetic value. Employ multiple silvicultural systems where appropriate based on stand and property level evaluation. Seek areas to plant to oak to increase property acreage in this type. Conduct intermediate thinnings when needed to maintain stand health and vigor. Use even-aged management to regenerate oak stands through coppice, seedtree or shelterwood harvesting.

(6) **Jack Pine (1%)** – Maintain this under-represented type whenever possible. Employ even-aged management techniques such as clearcutting or other patch cutting to mimic the natural disturbance needed to regenerate the type.

(7) **Red Pine** 1% – Determine management objectives for red pine plantations based on property level ecological goals. Carry stands through rotation with intermediate thinnings, or convert plantations to other types as appropriate.

(8) **White Pine** (2%) – Maintain and expand natural white pine stands for their historic significance, as well as wildlife, economic, and aesthetic value. Determine management objectives for white pine plantations based on property level ecological goals. Carry stands through rotation with intermediate thinnings, or convert plantations to other types as appropriate. Plantations can also be thinned to mimic natural stands and carried to extended rotation for ecological and aesthetic benefit.

ALL STANDS – The Wildlife Action Plan describes Priority Conservation Actions that make effective use of limited resources and address multiple species with each action. Implementing these actions and avoiding activities that may preclude successful implementation of these actions in the future would greatly benefit SGCNs within the LWSR. All proposed forestry prescriptions should reference Priority Conservation Actions, Wildlife Action Plan priorities, property objectives and be based on individual stand level needs.

APPROVALS:

District Ecologist — 3/27/2013 — Date

Forester — 3-26-13 — Date

Property Manager — 03-26-13 — Date

Area/Team Supervisor — 3-26-13 — Date